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| 10/673,115 | 09/26/2003 | Andrew D. Flockhart | 4366-108 | 2014 |

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| EXAMINER |
|---|
| KARDOS, NEIL R |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 November 2009*.

2a)☐ This action is **FINAL**.           2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *51-68* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *51-68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *12/11/09, 2/5/10*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

## DETAILED ACTION

This is a **NON-FINAL** Office Action on the merits in response to request for continued

examination filed on November 12, 2009. Currently, claims 51-68 are pending.

### *Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on November 12, 2009 has been entered.

### *Response to Arguments*

Applicant's arguments with respect to the claims have been considered but are moot in

view of the new ground(s) of rejection.

### *Claim Objections*

**Claims 56, 59, 60, and 66 are objected to under 37 CFR 1.75(c), as being of**

**improper dependent form for failing to further limit the subject matter of a previous claim.**

**Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in**

**proper dependent form, or rewrite the claim(s) in independent form.**

Claims 56 and 66: Claim 56 recites "for each of queues." It should recite "for each of the

queues." Correction is required.

Claims 59 and 60: Claims 59 and 60 are directed to "means for performing" and
"computational components that perform" the steps of claim 1. This claim is improper because it
fails the "infringement test" (see MPEP 608.01(n), Section III). Applying the infringement test,
what is needed to infringe claims 59 and 60 is, for example a system to perform the steps recited
in claim 51. However, such a system would not infringe the method steps of claim 51 since the
claimed system is not required to perform any of the active steps required by the method of claim
51. In other words, mere possession of such a system would infringe claims 59 and 60, but
would not infringe claim 51. Thus, claims 59 and 60 are improper dependent claims.

### Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

**Claims 51-68 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply
with the written description requirement. The claim(s) contains subject matter which was
not described in the specification in such a way as to reasonably convey to one skilled in the
relevant art that the inventor(s), at the time the application was filed, had possession of the
claimed invention.**

Claims 51 and 61: Claims 51 and 61 recite selecting "a calendar to be associated with
one of the one or more work items." There is no support in the specification for associating a

calendar with a work item. The specification discloses associating a calendar with a queue, not

with an individual item in the queue.

<u>Claims 52-60 and 62-68</u>: The dependent claims are rejected for failing to remedy the

deficiencies of the claims from which they depend.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

**Claims 52, 53, 62, and 63 are rejected under 35 U.S.C. 112, second paragraph, as**

**being indefinite for failing to particularly point out and distinctly claim the subject matter**

**which applicant regards as the invention.**

<u>Claim 52</u>: One of ordinary skill in the art would not understand what is meant by the

limitations of claim 52. What is a calendar start time? When does a calendar "start"? Does this

refer to the start of a day, the start of a work period, or the start of the "calendar" in general?

How is a real time "subtracted from" a calendar start time? Does the "modulus" operation equate

to taking the absolute value, or does it represent the remainder of a division operation? Claim 52

requires significant clarification in order for one of ordinary skill in the art to understand the

claim limitations.

Because claim 52 is indefinite, no art rejection is warranted as substantial guesswork

would be involved in determining the scope and content of these claims. *See in re Steele*, 305

F.2d 859, 134 USPQ 292 (CCPA 1962); *Ex parte Brummer*, 12 USPQ 2d, 1653, 1655 (BPAI

1989); *see also in re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). Prior art pertinent to

the disclosed invention is nevertheless cited and applicants are reminded they must consider all

cited art under Rule 111(c) when amending the claims to conform with 35 U.S.C. 112.

Claim 53: The dependent claims are rejected for failing to remedy the deficiencies of the

claims from which they depend. Because claim 52 is so indefinite as not to receive examination,

claim 53 has not been examined either.

Claims 62 and 63: Claims 62 and 63 are substantially similar to claims 52 and 53, and

are rejected under similar rationale. Because these claims are so indefinite, prior art has not been

applied to them.

## *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claims 51, 54-61, and 64-68 are rejected under 35 U.S.C. 103(a) as being**

**unpatentable over Foster (US 6,356,632) in view of Charnock (US 2003/0182310), and**

**further in view of Burok (US 2003/0152212).**

Claim 51: Foster discloses a method comprising:

- receiving one or more work items to be assigned to a queue (see column 4: lines

    5-27, disclosing queuing calls);

- selecting, by a scheduler, a calendar to be associated with one of the one or more work items (see column 4: line 28 through column 6: line 46; the reference discloses an agent selector that selects an agent and that agent's schedule is associated with the call in queue).

Charnock discloses a calendar used for a real-time to business-time or business-time to real-time conversion, and wherein the calendar has an associated granularity (see paragraph 410, disclosing indexing between business time and real time; see also Foster: column 4: line 28 through column 6: line 46; the reference discloses incorporating agent breaks and shifts into the schedule) and inserting, by the scheduler, at the head of the queue, and before the work item, an appropriate off-time to account for a non-business time, wherein work items in the queue are thus delayed by the appropriate amount of off-time corresponding to the non-business time (see id.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Charnock's calculations of service times based on business time when calculating service times based on Foster's agent schedules. One of ordinary skill in the art would have been motivated to do so for the benefit of a more accurate service time.

Burok discloses creating an index into a business-time to real-time table (see paragraph 57, disclosing that a time of 45 days should be converted to working hours instead of days). Although Burok does not explicitly disclose placing a time delay in a queue, this limitation is obvious. For example, Burok suggests that if an item is due in one business day (e.g. a phone call at 4 p.m. on Monday is due at 4 p.m. on Tuesday), that item should be expressed as being due in 8 working hours. Thus, there would be a delay from 5 p.m. on Monday until 9 a.m. on Tuesday where the working hours would not be counted toward the service time or remaining

time in the commitment. Examiner takes Official Notice that it was well-known in the art at the

time the invention was made to use delays to push items in a queue back in time. An example of

this is a "dummy" task that is inserted into a workflow. As documentary support to the Official

Notice, Examiner has provided a copy of the "User's Guide for Microsoft Project" for Windows

95 and Windows 3.1. The user's guide discloses allocating a list of tasks with associated

durations to specified resources, wherein a time delay can be placed within the task list to ignore

non-business time (see page 7, disclosing creating a task list with durations for the tasks; page

10, disclosing assigning a task to a resource, as well as ignoring Saturday and Sunday as non-

business time when scheduling; page 18, disclosing project calendars defining working days and

hours; pages 24-25, disclosing inserting a delay or "lag time" between tasks; page 31, disclosing

assigning resources to tasks; pages 38-40, disclosing resource calendars).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to use Burok's index for calculating Charnock's service times and include them in a

calculation of service time based on Foster's agent schedules. One of ordinary skill in the art

would have been motivated to do so for the benefit of a more accurate service time.

Foster does not explicitly disclose wherein the queue is a delta queue. Applicant admits

that delta queues are known in the art (see originally-filed Specification: page 12: line 11). It

would have been obvious to one of ordinary skill in the art at the time the invention was made to

use delta queues as the queues of Foster. One of ordinary skill in the art would have been

motivated to do so for the benefit of efficiencies gained by using delta queues.

Claim 54: Foster discloses determining which of the queues into which a work item should be placed, each of the queues having an associated calendar including business-time and non-business time periods (see column 4: line 28 through column 6: line 46; the reference discloses placing calls into different queues and selecting agents to service the calls, where the agents have business and non-business hours).

Claim 55: Foster discloses placing the work item at a tail of one of said plurality of queues based on the determination (see column 4: line 28 through column 6: line 46; the reference discloses adding calls to a queue).

Claim 56: Foster discloses wherein the determining step includes predetermined techniques that perform resource allocation within the scheduler for each of the queues independently of the calendar associated with the queues (see column 4: line 28 through column 6: line 46; the reference discloses placing calls into different queues and selecting agents to service the calls).

Claim 57: Foster discloses wherein when the one or more work items are placed in the delta queue, a service time is associated with each work item, a timer is associated with the work items, and when the timer expires the service time has elapsed (see column 6: lines 40-45, disclosing call wait time thresholds).

Claim 58: The cited references do not explicitly disclose wherein the work items are stored in time order, with the work item nearest a front of the queue having a soonest timeout and the first entry in the delta queue records a time at which the corresponding work item will timeout relative to a current time, and each subsequent entry in the delta queue records a timeout of the corresponding work item relative to the timeout of the previous work item in the queue. This claim merely describes a delta queue. Applicant admits that delta queues are known in the art (see originally-filed Specification: page 12: line 11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use delta queues as the queues of Foster. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained by using delta queues.

Claims 59-61: Claims 59-61 are substantially similar to claim 1 and are rejected under similar rationale.

Claims 64-68: Claims 64-68 are substantially similar to claims 54-58 and are rejected under similar rationale.

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. Kardos whose telephone number is (571) 270-3443. The examiner can normally be reached on Monday through Friday from 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


                                    Neil R. Kardos
                                    Examiner
                                    Art Unit 3623


/Neil R. Kardos/
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